February 27, 2107

Via Overnight and Electronic Mail

Central Valley Regional Water Quality Control Board
Attn: Hossein Aghazeynali
1685 E Street
Fresno, CA 93706
Hossein.Aghazeynali@waterboards.ca.gov

Re: Tentative Waste Discharge Requirements General Orders for Oil Field Discharges to Land

Dear Mr. Aghazeynali:

On behalf of the Center for Biological Diversity ("the Center") and its members, I am writing to submit the following comments regarding the Tentative Waste Discharge Requirements General Orders One, Two, and Three for Discharges of Oil Field Produced Wastewater to Land ("Tentative Orders"). The Center submitted written comments to your office on May 27, 2016 and on July 11, 2016 in response previous iterations of these orders. The Tentative Orders do not address the concerns raised in the Center's May 27th comment letter ("May 27th letter") nor the July 11, 2016 letter ("July 11th Letter"). Now in its third iteration, the new tentative Orders have not addressed the Center's concerns about the potential harms that would result from the Central Valley Regional Water Quality Control Board's ("Regional Water Board") proposal to allow oil and gas wastewater to be discharged directly onto land. Because the issues raised in the Center's previous comment letters still persist, the Center's previous letters' are hereby incorporated in this letter, as well as the supporting references that have already been sent and are in the Regional Water Board's possession.

Wastewater Discharges to Land Is Dangerous and Should Be Eliminated

The practice of disposing wastewater into pits has been phased out in some states, including Kansas, Texas, and Ohio. According to an independent scientific study on California's oil and gas practices, a panel of scientists noted that "this practice provides a direct pathway for the transport of produced water constituents, including returned stimulation fluids, into groundwater."[1]

The study found that "[t]here is ample evidence of groundwater contamination from percolation pits in California and other states. For example, in California, the Central Valley Regional Water Quality Control Board determined that several percolation pits in Lost Hills and North and South Belridge had impacted groundwater, and ordered their closure."[2]

[1] California Counsel of Science and Technology, An Independent Scientific Study of Well Stimulation in California, Vol. II, July 2015 ("CCST Report") at p. 110.
[2] Id. (internal citations omitted).

Due to the inherent danger of this type of wastewater disposal, the study recommended that, "If the presence of hazardous concentrations of chemicals cannot be ruled out, [responsible agencies] should phase out the practice of discharging produced water into percolation pits."[3]

Instead of phasing out wastewater discharges to land, these general orders entrench the practice jeopardize the land, water, and wildlife of the region. The general orders even leave open the possibility of new and expanded pits in the region under separate waste discharge requirements, the standards for which are not described.

Discharging Wastewater Originating from Wells that Have Undergone Well Stimulation Is Dangerous and Illegal

The General Orders appear to allow wastewater from well that have undergone well stimulation to be discharged into pits. This is both dangerous and illegal under current law.

The harmful chemicals naturally occurring in the formation, along with chemicals used in the drilling, completion, and extraction processes, make wastewater from any oil and gas well a significant risk to water quality. But the risk of water contamination may increase when the wastewater originates from wells that have undergone well stimulation treatments in the past. The same CCST Report notes, "the presence of stimulation fluids in the produced water is likely to increase the risk of groundwater contamination."[4]

Under the California Code of Regulations, "produced water from a well that has had a well stimulation treatment … *shall not be stored in sumps or pits*."[5] The Division of Oil, Gas, and Geothermal Resources (DOGGR) reiterated, "Storage *or disposal* of well stimulation fluids in sumps or pits are [sic] prohibited by the permanent SB 4 regulations."[6] DOGGR has also stated in publicly filed court documents that "DOGGR's permanent regulations now *prohibit* the "historical impoundments" of wastewater in disposal pits."[7]

As drafted, the General Orders appear to allow wastewater from wells that have undergone well stimulation to be discharged into pits, a direct violation of state regulations.

The so-called "three-year time schedule" that allows operators to discharge wastewater from stimulated wells into pits is a blatant violation and poses a serious danger to water quality and public health and safety. The Regional Water Board's justification, that there are simply too many stimulated wells to apply the law, is altogether baffling and absurd. It is precisely because the scope of the problem is so broad that immediate action must be taken.

The General Orders Allow Unspecified Levels of Water Degradation

[3] CCST Report at p. 25
[4] CCST Report at p. 113.
[5] 14 Cal. Code Reg. § 1786(a) (emphasis added.)
[6] DOGGR, Senate Bill 4 Final Environmental Impact Report, Vol. II (June 2015) at 10.14-84 [citing 14 Cal. Code Reg. § 1786(a)(4)]
[7] *Center for Biological Diversity v. DOGGR* (Sacramento County Sup. Ct. 2016) Case No. 34-2015-80002149 (DOGGR, Opposition to 1st Amended Petition (July 13, 2016)

The General Orders state, "Limited degradation of groundwater by some waste constituents associated with produced wastewater, after effective source control, treatment, and control measures are implemented, is consistent with the maximum benefit to the people of the state." But the General Orders do not specify what "limited degradation" means nor do they provide sufficient justification for allowing for such contamination. An unspecified amount of degradation is vague and is not sufficient to demonstrate consistency with the interests of the people of the state.

The effluent limits only apply to electrical conductivity, chloride, boron. But there are no quantitative limits specified for other contaminants present in wastewater. Without limits, the public cannot be assured that groundwater will be adequately protected.

Chemical Disclosure Requirements Are Inadequate

The General Orders require quarterly reporting of the chemicals used as additives in the oil extraction process, but allow operators to hide the identities of some chemicals from the public based on unverified claims of trade secrets. The Regional Water Board should clarify that withholding information on chemicals used in well stimulation under trade secret claims is expressly barred under Senate Bill 4's provisions.[8] In addition, the constituents of wastewater contain the mixture of additives and naturally occurring chemicals that have mixed during the oil production process. Nothing is proprietary about wastewater. The Regional Water Board should require operators to substantiate any claims of trade secrets to ensure that they meet requirements under state law.

Even for information the agency determines to be a trade secret, it has the discretion to release the information to the public.[9] Given the import of chemical identification for public health and safety, the Regional Water Board should make all reported information publicly available.

Groundwater Monitoring Is Insufficient to Protect California's Groundwater

Groundwater Monitoring need not be in place when the General Orders are adopted, and there is no date by which a groundwater monitoring system must be in place. Rather, operators are free to take up to a year to submit a *plan* to monitor groundwater and suggest their own timetable for when actual groundwater monitoring will begin. The general orders do not prohibit wastewater disposal to land prior to groundwater monitoring, and thereby subject groundwater to significant risk for the convenience of the oil industry.

The General Orders also require monitoring of "discharges to groundwater" even though the rules apply to discharges to land.[10]

Failure to Comply with CEQA

[8] Pub. Res. Code § 3160(j)(2).
[9] Cal. Gov. Code § 6254 (noting that "nothing in this chapter shall be construed to require disclosure of records that [constitute] any of the following [exemptions].") Thus, agencies are not required to disclose trade secrets, but neither are they prohibited from doing so.
[10] See, e.g., General Order 1 at ¶ 34.

As stated in the Center's previous comment letters, the Regional Water Board's proposed General Orders may not be adopted without a full environmental review pursuant to the California Environmental Quality Act.[11]

The exemptions cited in the General Orders do not apply to projects such as the one being proposed by the Regional Water Board. Contrary to the Regional Water Board's assertion, the General Orders do not "enhance the protection of surface and groundwater resources." The General Orders allow for more discharges and in some cases higher effluent contaminant levels than what was allowed under individual permits in the past. It also purports to change *illegal* discharges that would have to terminate into permitted discharges that are allowed to continue. Inactive pits may also become active under these general orders. In addition, the General Orders suggest that water may be de-designated for beneficial use. Such an expansion of rights does not enhance protections.

The baseline used does not reflect current conditions. First, it is unclear what an "actual maximum monthly average" means, or how to calculate such a figure. It is also inappropriate to consider the illegally discharged wastewater into the 10-year baseline. For example, the Regional Water Board acknowledges the widespread practice of discharging produced water from stimulated wells, which is not permitted under current law. Considering this as part of the baseline artificially inflates the baseline and masks the increased discharge that these general orders would allow.

Allowing discharges directly to land is not a "minor disturbance." This order covers hundreds of pits across the region, which cumulatively may have a significant impact on the soil, water, wildlife, and habitats within the region. Individually and cumulatively, these impacts should be fully analyzed in an environmental impact report.

The failure to use CEQA means that mitigation measures are not fully explored, are improperly deferred, or simply too vague. For example, the General Orders require operators to use "best efforts" to minimize degradation to certain waters, without providing any guidance or criteria for what that might entail.

Inadequate Time and Clarity

The Regional Water Board has made the commenting process unnecessarily difficult and time-consuming by providing three separate proposed orders each round. The differences between proposed General Orders 1, 2, and 3 are not summarized in any document, making comparisons across the three orders extremely time-consuming and confusing. A significant portion of the text is redundant and spotting the differences among the three is cumbersome on the public. There is also no aggregate chart explaining, for example, what the different discharge contaminant level limits are for each order.

There was also no attempt to help explain what had changed between the first and second drafts of the three orders. And while the Regional Water Board released a "tracked changes" to help show what had been changed in the newest iteration of the general orders, it was sent on the afternoon of February 16, 2017, leaving only 5 working days before the deadline for submitting written

[11] Pub. Res. Code § 21000 et seq.

comments to the Regional Water Board. Such a compressed schedule for responding to changes is entirely inadequate.

Another potential avenue for making general orders more conducive to public review would be to respond to public comments after each set of draft orders. But because the Center did not receive any response from its first two sets of comments, it is time-consuming to determine what, if any, changes were made to address the public's concerns over the potential harms that would result from these dangerous practices.

Conclusion

We urge the Regional Water Board to prioritize protection of groundwater and the environment. The practice of discharging oil and gas industry wastewater to land is perilous and should be prohibited, as it is in other states. The Regional Water Board has an opportunity reform its oversight practices to reflect a transition away from dangerous oil and gas activity toward a safer, sustainable future.

Respectfully submitted,

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CC:

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Enclosures (sent via disk):

- May 27, 2016 Center Comment Letter
- July 11, 2016 Center Comment Letter
- CCST Report, Vol. II
- SB 4 FEIR, Vol. II
- DOGGR Opposition Brief, *Center for Biological Diversity v. DOGGR* (Sacramento County Superior Court, 2016)